

Sequence Listing

<110> Desnoyers,Luc
Eaton,Dan L.
Goddard,Audrey
Godowski,Paul J.
Gurney,Austin L.
Pan,James
Stewart,Timothy A.
Watanabe,Colin K.
Wood,William I.
Zhang,Zemin

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Gln	Thr	Gly	Gly	Leu	Pro	Pro	Asp	Cys	Ser	Lys	Cys	Cys	His	Gly	35	40	45	
Asp	Tyr	Ser	Phe	Arg	Gly	Tyr	Gln	Gly	Pro	Pro	Gly	Pro	Pro	Gly	50	55	60	
Pro	Pro	Gly	Ile	Pro	Gly	Asn	His	Gly	Asn	Asn	Gly	Asn	Asn	Gly	65	70	75	
Ala	Thr	Gly	His	Glu	Gly	Ala	Lys	Gly	Glu	Lys	Gly	Asp	Lys	Gly	80	85	90	
Asp	Leu	Gly	Pro	Arg	Gly	Glu	Arg	Gly	Gln	His	Gly	Pro	Lys	Gly	95	100	105	
Glu	Lys	Gly	Tyr	Pro	Gly	Ile	Pro	Pro	Glu	Leu	Gln	Ile	Ala	Phe	110	115	120	
Met	Ala	Ser	Leu	Ala	Thr	His	Phe	Ser	Asn	Gln	Asn	Ser	Gly	Ile	125	130	135	
Ile	Phe	Ser	Ser	Val	Glu	Thr	Asn	Ile	Gly	Asn	Phe	Phe	Asp	Val	140	145	150	

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Tyr	Leu	Met	His	Asn	Gly	Asn	Thr	Val	Phe	Ser	Met	Tyr	Ser	Tyr
				185					190					195
Glu	Met	Lys	Gly	Lys	Ser	Asp	Thr	Ser	Ser	Asn	His	Ala	Val	Leu
				200					205					210
Lys	Leu	Ala	Lys	Gly	Asp	Glu	Val	Trp	Leu	Arg	Met	Gly	Asn	Gly
				215					220					225
Ala	Leu	His	Gly	Asp	His	Gln	Arg	Phe	Ser	Thr	Phe	Ala	Gly	Phe
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Leu	Asp	Gly	Phe	Arg	Ser	Asp	Tyr	Ile	Ser	Asp	Glu	Ala	Leu	Glu
				35					40					45
Ser	Leu	Pro	Gly	Phe	Lys	Glu	Ile	Val	Ser	Arg	Gly	Val	Lys	Val
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Asp	Tyr	Leu	Thr	Pro	Asp	Phe	Pro	Ser	Leu	Ser	Tyr	Pro	Asn	Tyr
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Tyr	Thr	Leu	Met	Thr	Gly	Arg	His	Cys	Glu	Val	His	Gln	Met	Ile
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Gly	Asn	Tyr	Met	Trp	Asp	Pro	Thr	Thr	Asn	Lys	Ser	Phe	Asp	Ile
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Gly	Val	Asn	Lys	Asp	Ser	Leu	Met	Pro	Leu	Trp	Trp	Asn	Gly	Ser

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Pro Thr Tyr Cys	Leu Glu Tyr Lys Asn	Val Pro Thr Asp Ile	Asn
	155	160	165
Phe Ala Asn Ala	Val Ser Asp Ala Leu	Asp Ser Phe Lys Ser	Gly
	170	175	180
Arg Ala Asp Leu	Ala Ala Ile Tyr His	Glu Arg Ile Asp Val	Glu
	185	190	195
Gly His His Tyr	Gly Pro Ala Ser Pro	Gln Arg Lys Asp Ala	Leu
	200	205	210
Lys Ala Val Asp	Thr Val Leu Lys Tyr	Met Thr Lys Trp Ile	Gln
	215	220	225
Glu Arg Gly Leu	Gln Asp Arg Leu Asn	Val Ile Ile Phe Ser	Asp
	230	235	240
His Gly Met Thr	Asp Ile Phe Trp Met	Asp Lys Val Ile Glu	Leu
	245	250	255
Asn Lys Tyr Ile	Ser Leu Asn Asp Leu	Gln Gln Val Lys Asp	Arg
	260	265	270
Gly Pro Val Val	Ser Leu Trp Pro Ala	Pro Gly Lys His Ser	Glu
	275	280	285
Ile Tyr Asn Lys	Leu Ser Thr Val Glu	His Met Thr Val Tyr	Glu
	290	295	300
Lys Glu Ala Ile	Pro Ser Arg Phe Tyr	Tyr Lys Lys Gly Lys	Phe
	305	310	315
Val Ser Pro Leu	Thr Leu Val Ala Asp	Glu Gly Trp Phe Ile	Thr
	320	325	330
Glu Asn Arg Glu	Met Leu Pro Phe Trp	Met Asn Ser Thr Gly	Arg
	335	340	345
Arg Glu Gly Trp	Gln Arg Gly Trp His	Gly Tyr Asp Asn Glu	Leu
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	365	370	375
Ser Asn Phe Arg	Ala Ala Pro Ile Arg	Ser Val Asp Val Tyr	Asn
	380	385	390
Val Met Cys Asn	Val Val Gly Ile Thr	Pro Leu Pro Asn Asn	Gly
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His	Gly	Thr	Pro	His	Cys	Tyr	Ser	Ala	Glu	Glu	Leu	Pro	Leu	Gly
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Gln	Ala	Pro	Pro	His	Leu	Leu	Ala	Arg	Gly	Ala	Lys	Trp	Gly	Gln
				50					55					60
Ala	Leu	Pro	Val	Ala	Leu	Val	Ser	Ser	Leu	Glu	Ala	Ala	Ser	His
				65					70					75
Arg	Gly	Arg	His	Glu	Arg	Pro	Ser	Ala	Thr	Thr	Gln	Cys	Pro	Val
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Leu	Arg	Pro	Glu	Glu	Val	Leu	Glu	Ala	Asp	Thr	His	Gln	Arg	Ser
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Ile	Ser	Pro	Trp	Arg	Tyr	Arg	Val	Asp	Thr	Asp	Glu	Asp	Arg	Tyr
				110					115					120
Pro	Gln	Lys	Leu	Ala	Phe	Ala	Glu	Cys	Leu	Cys	Arg	Gly	Cys	Ile
				125					130					135
Asp	Ala	Arg	Thr	Gly	Arg	Glu	Thr	Ala	Ala	Leu	Asn	Ser	Val	Arg
				140					145					150
Leu	Leu	Gln	Ser	Leu	Leu	Val	Leu	Arg	Arg	Arg	Pro	Cys	Ser	Arg
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Asp	Gly	Ser	Gly	Leu	Pro	Thr	Pro	Gly	Ala	Phe	Ala	Phe	His	Thr
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<212> PRT
<213> Homo Sapien

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Phe Gly Gly Cys Ser His Gly Ser Arg Cys Leu Arg Asp Ser Thr
          35           40           45
His Cys Val Thr Thr Ala Thr Arg Val Leu Ser Asn Thr Glu Asp
          50           55           60
Leu Pro Leu Val Thr Lys Met Cys His Ile Gly Cys Pro Asp Ile
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 aagccttata ttacaaatca accaggagac acccatcaga atgtggttgt 1000
 tactgaagca ggtataattc ccaatctaata ttatgttgtt ataccaacaa 1050
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<210> 18
 <211> 273
 <212> PRT
 <213> Homo Sapien

<400> 18
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 Cys Phe Ala Asp Phe Lys His Pro Cys Tyr Lys Met Ala Tyr Phe
 35 40 45
 His Glu Leu Ser Ser Arg Val Ser Phe Gln Glu Ala Arg Leu Ala
 50 55 60
 Cys Glu Ser Glu Gly Gly Val Leu Leu Ser Leu Glu Asn Glu Ala
 65 70 75
 Glu Gln Lys Leu Ile Glu Ser Met Leu Gln Asn Leu Thr Lys Pro
 80 85 90
 Gly Thr Gly Ile Ser Asp Gly Asp Phe Trp Ile Gly Leu Trp Arg
 95 100 105
 Asn Gly Asp Gly Gln Thr Ser Gly Ala Cys Pro Asp Leu Tyr Gln
 110 115 120
 Trp Ser Asp Gly Ser Asn Ser Gln Tyr Arg Asn Trp Tyr Thr Asp
 125 130 135
 Glu Pro Ser Cys Gly Ser Glu Lys Cys Val Val Met Tyr His Gln
 140 145 150
 Pro Thr Ala Asn Pro Gly Leu Gly Gly Pro Tyr Leu Tyr Gln Trp
 155 160 165
 Asn Asp Asp Arg Cys Asn Met Lys His Asn Tyr Ile Cys Lys Tyr

	170	175	180
Glu Pro Glu Ile	Asn Pro Thr Ala Pro	Val Glu Lys Pro Tyr	Leu
	185	190	195
Thr Asn Gln Pro	Gly Asp Thr His Gln	Asn Val Val Val Thr	Glu
	200	205	210
Ala Gly Ile Ile	Pro Asn Leu Ile Tyr	Val Val Ile Pro Thr	Ile
	215	220	225
Pro Leu Leu Leu	Leu Ile Leu Val Ala	Phe Gly Thr Cys Cys	Phe
	230	235	240
Gln Met Leu His	Lys Ser Lys Gly Arg	Thr Lys Thr Ser Pro	Asn
	245	250	255
Gln Ser Thr Leu	Trp Ile Ser Lys Ser	Thr Arg Lys Glu Ser	Gly
	260	265	270
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 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 19
 caccaaccaa ctgccaatcc tggc 24

<210> 20
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 20
 accacattct gatgggtgtc tcctgg 26

<210> 21
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 21
 ggtccctac ctttaccagt ggaatgatga caggtgtaac atgaagcac 49

<210> 22
 <211> 3824

<212> DNA

<213> Homo Sapien

<400> 22

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 aataaatctt gctactgccc aaaa 3824

<210> 23

<211> 571

<212> PRT

<213> Homo Sapien

<400> 23

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				20					25				30	
Val	Ala	Gln	Pro	Glu	Val	Asp	Thr	Thr	Leu	Gly	Arg	Val	Arg	Gly
				35					40				45	
Arg	Gln	Val	Gly	Val	Lys	Gly	Thr	Asp	Arg	Leu	Val	Asn	Val	Phe

50										55					60				
Leu	Gly	Ile	Pro	Phe	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Asp	Arg	Phe					
				65					70					75					
Ser	Ala	Pro	His	Pro	Ala	Gln	Pro	Trp	Glu	Gly	Val	Arg	Asp	Ala					
				80					85					90					
Ser	Thr	Ala	Pro	Pro	Met	Cys	Leu	Gln	Asp	Val	Glu	Ser	Met	Asn					
				95					100					105					
Ser	Ser	Arg	Phe	Val	Leu	Asn	Gly	Lys	Gln	Gln	Ile	Phe	Ser	Val					
				110					115					120					
Ser	Glu	Asp	Cys	Leu	Val	Leu	Asn	Val	Tyr	Ser	Pro	Ala	Glu	Val					
				125					130					135					
Pro	Ala	Gly	Ser	Gly	Arg	Pro	Val	Met	Val	Trp	Val	His	Gly	Gly					
				140					145					150					
Ala	Leu	Ile	Thr	Gly	Ala	Ala	Thr	Ser	Tyr	Asp	Gly	Ser	Ala	Leu					
				155					160					165					
Ala	Ala	Tyr	Gly	Asp	Val	Val	Val	Val	Thr	Val	Gln	Tyr	Arg	Leu					
				170					175					180					
Gly	Val	Leu	Gly	Phe	Phe	Ser	Thr	Gly	Asp	Glu	His	Ala	Pro	Gly					
				185					190					195					
Asn	Gln	Gly	Phe	Leu	Asp	Val	Val	Ala	Ala	Leu	Arg	Trp	Val	Gln					
				200					205					210					
Glu	Asn	Ile	Ala	Pro	Phe	Gly	Gly	Asp	Leu	Asn	Cys	Val	Thr	Val					
				215					220					225					
Phe	Gly	Gly	Ser	Ala	Gly	Gly	Ser	Ile	Ile	Ser	Gly	Leu	Val	Leu					
				230					235					240					
Ser	Pro	Val	Ala	Ala	Gly	Leu	Phe	His	Arg	Ala	Ile	Thr	Gln	Ser					
				245					250					255					
Gly	Val	Ile	Thr	Thr	Pro	Gly	Ile	Ile	Asp	Ser	His	Pro	Trp	Pro					
				260					265					270					
Leu	Ala	Gln	Lys	Ile	Ala	Asn	Thr	Leu	Ala	Cys	Ser	Ser	Ser	Ser					
				275					280					285					
Pro	Ala	Glu	Met	Val	Gln	Cys	Leu	Gln	Gln	Lys	Glu	Gly	Glu	Glu					
				290					295					300					
Leu	Val	Leu	Ser	Lys	Lys	Leu	Lys	Asn	Thr	Ile	Tyr	Pro	Leu	Thr					
				305					310					315					
Val	Asp	Gly	Thr	Val	Phe	Pro	Lys	Ser	Pro	Lys	Glu	Leu	Leu	Lys					
				320					325					330					
Glu	Lys	Pro	Phe	His	Ser	Val	Pro	Phe	Leu	Met	Gly	Val	Asn	Asn					
				335					340					345					

His	Glu	Phe	Ser	Trp	Leu	Ile	Pro	Arg	Gly	Trp	Gly	Leu	Leu	Asp	350	355	360
Thr	Met	Glu	Gln	Met	Ser	Arg	Glu	Asp	Met	Leu	Ala	Ile	Ser	Thr	365	370	375
Pro	Val	Leu	Thr	Ser	Leu	Asp	Val	Pro	Pro	Glu	Met	Met	Pro	Thr	380	385	390
Val	Ile	Asp	Glu	Tyr	Leu	Gly	Ser	Asn	Ser	Asp	Ala	Gln	Ala	Lys	395	400	405
Cys	Gln	Ala	Phe	Gln	Glu	Phe	Met	Gly	Asp	Val	Phe	Ile	Asn	Val	410	415	420
Pro	Thr	Val	Ser	Phe	Ser	Arg	Tyr	Leu	Arg	Asp	Ser	Gly	Ser	Pro	425	430	435
Val	Phe	Phe	Tyr	Glu	Phe	Gln	His	Arg	Pro	Ser	Ser	Phe	Ala	Lys	440	445	450
Ile	Lys	Pro	Ala	Trp	Val	Lys	Ala	Asp	His	Gly	Ala	Glu	Gly	Ala	455	460	465
Phe	Val	Phe	Gly	Gly	Pro	Phe	Leu	Met	Asp	Glu	Ser	Ser	Arg	Leu	470	475	480
Ala	Phe	Pro	Glu	Ala	Thr	Glu	Glu	Glu	Lys	Gln	Leu	Ser	Leu	Thr	485	490	495
Met	Met	Ala	Gln	Trp	Thr	His	Phe	Ala	Arg	Thr	Gly	Asp	Pro	Asn	500	505	510
Ser	Lys	Ala	Leu	Pro	Pro	Trp	Pro	Gln	Phe	Asn	Gln	Ala	Glu	Gln	515	520	525
Tyr	Leu	Glu	Ile	Asn	Pro	Val	Pro	Arg	Ala	Gly	Gln	Lys	Phe	Arg	530	535	540
Glu	Ala	Trp	Met	Gln	Phe	Trp	Ser	Glu	Thr	Leu	Pro	Ser	Lys	Ile	545	550	555
Gln	Gln	Trp	His	Gln	Lys	Gln	Lys	Asn	Arg	Lys	Ala	Gln	Glu	Asp	560	565	570

Leu

<210> 24

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 24

gcaaagctct gcctccttgg cc 22

<210> 25
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
gggtggactg tgctctaag gacgc 25

<210> 26
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtggcactg ggttgatc 18

<210> 27
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
gatgcagttc tggtcagaga cgctccccag caagatacaa cagtg 45

<210> 28
<211> 1342
<212> DNA
<213> Homo Sapien

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aggatattgc agttttgctg tctatagttc tatgcacagt aacgctattt 100
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tgaagtgaag gatgcaaaag gaagaactgt ttctctggaa aagtataaag 200
gcaaagtttc actagttgta aacgtggcca gtgactgcca actcacagac 250
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 attataacat ttgaaaaagt cttcatcaaa aaaaaaaaaa aa 1342

<210> 29
 <211> 209
 <212> PRT
 <213> Homo Sapien

<400> 29
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 Thr Leu Phe Leu Leu Gln Leu Lys Phe Leu Lys Pro Lys Ile Asn
 35 40 45
 Ser Phe Tyr Ala Phe Glu Val Lys Asp Ala Lys Gly Arg Thr Val
 50 55 60
 Ser Leu Glu Lys Tyr Lys Gly Lys Val Ser Leu Val Val Asn Val
 65 70 75
 Ala Ser Asp Cys Gln Leu Thr Asp Arg Asn Tyr Leu Gly Leu Lys
 80 85 90

Glu	Leu	His	Lys	Glu	Phe	Gly	Pro	Ser	His	Phe	Ser	Val	Leu	Ala
				95					100					105
Phe	Pro	Cys	Asn	Gln	Phe	Gly	Glu	Ser	Glu	Pro	Arg	Pro	Ser	Lys
				110					115					120
Glu	Val	Glu	Ser	Phe	Ala	Arg	Lys	Asn	Tyr	Gly	Val	Thr	Phe	Pro
				125					130					135
Ile	Phe	His	Lys	Ile	Lys	Ile	Leu	Gly	Ser	Glu	Gly	Glu	Pro	Ala
				140					145					150
Phe	Arg	Phe	Leu	Val	Asp	Ser	Ser	Lys	Lys	Glu	Pro	Arg	Trp	Asn
				155					160					165
Phe	Trp	Lys	Tyr	Leu	Val	Asn	Pro	Glu	Gly	Gln	Val	Val	Lys	Phe
				170					175					180
Trp	Arg	Pro	Glu	Glu	Pro	Ile	Glu	Val	Ile	Arg	Pro	Asp	Ile	Ala
				185					190					195
Ala	Leu	Val	Arg	Gln	Val	Ile	Ile	Lys	Lys	Lys	Glu	Asp	Leu	
				200					205					

<210> 30
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 30
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<210> 31
 <211> 20
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<220>
 <223> Synthetic oligonucleotide probe

<400> 31
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<210> 32
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 32
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<210> 33

<211> 50
<212> DNA
<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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<210> 34
<211> 3721
<212> DNA
<213> Homo Sapien

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<210> 35

<211> 888

<212> PRT

<213> Homo Sapien

<400> 35

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Pro	Pro	Pro	Leu	Ser	Val	Ala	Pro	Arg	Asp	Tyr	Leu	Asn	His	Tyr	35	40	45
Pro	Val	Phe	Val	Gly	Ser	Gly	Pro	Gly	Arg	Leu	Thr	Pro	Ala	Glu	50	55	60
Gly	Ala	Asp	Asp	Leu	Asn	Ile	Gln	Arg	Val	Leu	Arg	Val	Asn	Arg	65	70	75
Thr	Leu	Phe	Ile	Gly	Asp	Arg	Asp	Asn	Leu	Tyr	Arg	Val	Glu	Leu	80	85	90
Glu	Pro	Pro	Thr	Ser	Thr	Glu	Leu	Arg	Tyr	Gln	Arg	Lys	Leu	Thr	95	100	105
Trp	Arg	Ser	Asn	Pro	Ser	Asp	Ile	Asn	Val	Cys	Arg	Met	Lys	Gly	110	115	120
Lys	Gln	Glu	Gly	Glu	Cys	Arg	Asn	Phe	Val	Lys	Val	Leu	Leu	Leu	125	130	135
Arg	Asp	Glu	Ser	Thr	Leu	Phe	Val	Cys	Gly	Ser	Asn	Ala	Phe	Asn	140	145	150
Pro	Val	Cys	Ala	Asn	Tyr	Ser	Ile	Asp	Thr	Leu	Gln	Pro	Val	Gly	155	160	165
Asp	Asn	Ile	Ser	Gly	Met	Ala	Arg	Cys	Pro	Tyr	Asp	Pro	Lys	His	170	175	180
Ala	Asn	Val	Ala	Leu	Phe	Ser	Asp	Gly	Met	Leu	Phe	Thr	Ala	Thr	185	190	195
Val	Thr	Asp	Phe	Leu	Ala	Ile	Asp	Ala	Val	Ile	Tyr	Arg	Ser	Leu	200	205	210
Gly	Asp	Arg	Pro	Thr	Leu	Arg	Thr	Val	Lys	His	Asp	Ser	Lys	Trp	215	220	225
Phe	Lys	Glu	Pro	Tyr	Phe	Val	His	Ala	Val	Glu	Trp	Gly	Ser	His	230	235	240
Val	Tyr	Phe	Phe	Phe	Arg	Glu	Ile	Ala	Met	Glu	Phe	Asn	Tyr	Leu	245	250	255
Glu	Lys	Val	Val	Val	Ser	Arg	Val	Ala	Arg	Val	Cys	Lys	Asn	Asp	260	265	270
Val	Gly	Gly	Ser	Pro	Arg	Val	Leu	Glu	Lys	Gln	Trp	Thr	Ser	Phe	275	280	285
Leu	Lys	Ala	Arg	Leu	Asn	Cys	Ser	Val	Pro	Gly	Asp	Ser	His	Phe	290	295	300
Tyr	Phe	Asn	Val	Leu	Gln	Ala	Val	Thr	Gly	Val	Val	Ser	Leu	Gly			

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Gly Arg Pro Val	Val Leu Ala Val Phe	Ser Thr Pro Ser Asn	Ser
	320	325	330
Ile Pro Gly Ser	Ala Val Cys Ala Phe	Asp Leu Thr Gln Val	Ala
	335	340	345
Ala Val Phe Glu	Gly Arg Phe Arg Glu	Gln Lys Ser Pro Glu	Ser
	350	355	360
Ile Trp Thr Pro	Val Pro Glu Asp Gln	Val Pro Arg Pro Arg	Pro
	365	370	375
Gly Cys Cys Ala	Ala Pro Gly Met Gln	Tyr Asn Ala Ser Ser	Ala
	380	385	390
Leu Pro Asp Asp	Ile Leu Asn Phe Val	Lys Thr His Pro Leu	Met
	395	400	405
Asp Glu Ala Val	Pro Ser Leu Gly His	Ala Pro Trp Ile Leu	Arg
	410	415	420
Thr Leu Met Arg	His Gln Leu Thr Arg	Val Ala Val Asp Val	Gly
	425	430	435
Ala Gly Pro Trp	Gly Asn Gln Thr Val	Val Phe Leu Gly Ser	Glu
	440	445	450
Ala Gly Thr Val	Leu Lys Phe Leu Val	Arg Pro Asn Ala Ser	Thr
	455	460	465
Ser Gly Thr Ser	Gly Leu Ser Val Phe	Leu Glu Glu Phe Glu	Thr
	470	475	480
Tyr Arg Pro Asp	Arg Cys Gly Arg Pro	Gly Gly Gly Glu Thr	Gly
	485	490	495
Gln Arg Leu Leu	Ser Leu Glu Leu Asp	Ala Ala Ser Gly Gly	Leu
	500	505	510
Leu Ala Ala Phe	Pro Arg Cys Val Val	Arg Val Pro Val Ala	Arg
	515	520	525
Cys Gln Gln Tyr	Ser Gly Cys Met Lys	Asn Cys Ile Gly Ser	Gln
	530	535	540
Asp Pro Tyr Cys	Gly Trp Ala Pro Asp	Gly Ser Cys Ile Phe	Leu
	545	550	555
Ser Pro Gly Thr	Arg Ala Ala Phe Glu	Gln Asp Val Ser Gly	Ala
	560	565	570
Ser Thr Ser Gly	Leu Gly Asp Cys Thr	Gly Leu Leu Arg Ala	Ser
	575	580	585
Leu Ser Glu Asp	Arg Ala Gly Leu Val	Ser Val Asn Leu Leu	Val
	590	595	600

Thr Ser Ser Val	Ala Ala Phe Val Val	Gly Ala Val Val Ser	Gly
605		610	615
Phe Ser Val Gly	Trp Phe Val Gly Leu	Arg Glu Arg Arg Glu	Leu
620		625	630
Ala Arg Arg Lys	Asp Lys Glu Ala Ile	Leu Ala His Gly Ala	Gly
635		640	645
Glu Ala Val Leu	Ser Val Ser Arg Leu	Gly Glu Arg Arg Ala	Gln
650		655	660
Gly Pro Gly Gly	Arg Gly Gly Gly Gly	Gly Gly Gly Ala Gly	Val
665		670	675
Pro Pro Glu Ala	Leu Leu Ala Pro Leu	Met Gln Asn Gly Trp	Ala
680		685	690
Lys Ala Thr Leu	Leu Gln Gly Gly Pro	His Asp Leu Asp Ser	Gly
695		700	705
Leu Leu Pro Thr	Pro Glu Gln Thr Pro	Leu Pro Gln Lys Arg	Leu
710		715	720
Pro Thr Pro His	Pro His Pro His Ala	Leu Gly Pro Arg Ala	Trp
725		730	735
Asp His Gly His	Pro Leu Leu Pro Ala	Ser Ala Ser Ser Ser	Leu
740		745	750
Leu Leu Leu Ala	Pro Ala Arg Ala Pro	Glu Gln Pro Pro Ala	Pro
755		760	765
Gly Glu Pro Thr	Pro Asp Gly Arg Leu	Tyr Ala Ala Arg Pro	Gly
770		775	780
Arg Ala Ser His	Gly Asp Phe Pro Leu	Thr Pro His Ala Ser	Pro
785		790	795
Asp Arg Arg Arg	Val Val Ser Ala Pro	Thr Gly Pro Leu Asp	Pro
800		805	810
Ala Ser Ala Ala	Asp Gly Leu Pro Arg	Pro Trp Ser Pro Pro	Pro
815		820	825
Thr Gly Ser Leu	Arg Arg Pro Leu Gly	Pro His Ala Pro Pro	Ala
830		835	840
Ala Thr Leu Arg	Arg Thr His Thr Phe	Asn Ser Gly Glu Ala	Arg
845		850	855
Pro Gly Asp Arg	His Arg Gly Cys His	Ala Arg Pro Gly Thr	Asp
860		865	870
Leu Ala His Leu	Leu Pro Tyr Gly Gly	Ala Asp Arg Thr Ala	Pro
875		880	885
Pro Val Pro			

<210> 36
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 36
gaggacctac cggccggaca g 21

<210> 37
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 37
atacaccocg agtactgctg gcag 24

<210> 38
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 38
agacagggca gcggtgctg agcttggagc tggacgcagc tt 42

<210> 39
<211> 2014
<212> DNA
<213> Homo Sapien

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ggccggggaca gcagaacgcc aggggacctt cacctgggag cgccggggca 100
cggtgcttga ttgtcctggg gtcgaggaga cccgcgcgcc tgccctgcac 150
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<210> 40
 <211> 502
 <212> PRT
 <213> Homo Sapien

<400> 40
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 Lys Ser Glu Ile Trp Gly Pro Gly Leu Lys Ala Asp Val Val Leu
 35 40 45
 Pro Ala Arg Tyr Phe Tyr Ile Gln Ala Val Asp Thr Ser Gly Asn
 50 55 60
 Lys Phe Thr Ser Ser Pro Gly Glu Lys Val Phe Gln Val Lys Val
 65 70 75
 Ser Ala Pro Glu Glu Gln Phe Thr Arg Val Gly Val Gln Val Leu
 80 85 90
 Asp Arg Lys Asp Gly Ser Phe Ile Val Arg Tyr Arg Met Tyr Ala
 95 100 105
 Ser Tyr Lys Asn Leu Lys Val Glu Ile Lys Phe Gln Gly Gln His
 110 115 120
 Val Ala Lys Ser Pro Tyr Ile Leu Lys Gly Pro Val Tyr His Glu
 125 130 135
 Asn Cys Asp Cys Pro Leu Gln Asp Ser Ala Ala Trp Leu Arg Glu
 140 145 150
 Met Asn Cys Pro Glu Thr Ile Ala Gln Ile Gln Arg Asp Leu Ala
 155 160 165
 His Phe Pro Ala Val Asp Pro Glu Lys Ile Ala Val Glu Ile Pro
 170 175 180
 Lys Arg Phe Gly Gln Arg Gln Ser Leu Cys His Tyr Thr Leu Lys
 185 190 195
 Asp Asn Lys Val Tyr Ile Lys Thr His Gly Glu His Val Gly Phe
 200 205 210
 Arg Ile Phe Met Asp Ala Ile Leu Leu Ser Leu Thr Arg Lys Val
 215 220 225
 Lys Met Pro Asp Val Glu Leu Phe Val Asn Leu Gly Asp Trp Pro

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Leu Glu Lys Lys	Lys Ser Asn Ser Asn	Ile His Pro Ile Phe Ser	
	245	250	255
Trp Cys Gly Ser	Thr Asp Ser Lys Asp	Ile Val Met Pro Thr Tyr	
	260	265	270
Asp Leu Thr Asp	Ser Val Leu Glu Thr	Met Gly Arg Val Ser Leu	
	275	280	285
Asp Met Met Ser	Val Gln Ala Asn Thr	Gly Pro Pro Trp Glu Ser	
	290	295	300
Lys Asn Ser Thr	Ala Val Trp Arg Gly	Arg Asp Ser Arg Lys Glu	
	305	310	315
Arg Leu Glu Leu	Val Lys Leu Ser Arg	Lys His Pro Glu Leu Ile	
	320	325	330
Asp Ala Ala Phe	Thr Asn Phe Phe Phe	Phe Lys His Asp Glu Asn	
	335	340	345
Leu Tyr Gly Pro	Ile Val Lys His Ile	Ser Phe Phe Asp Phe Phe	
	350	355	360
Lys His Lys Tyr	Gln Ile Asn Ile Asp	Gly Thr Val Ala Ala Tyr	
	365	370	375
Arg Leu Pro Tyr	Leu Leu Val Gly Asp	Ser Val Val Leu Lys Gln	
	380	385	390
Asp Ser Ile Tyr	Tyr Glu His Phe Tyr	Asn Glu Leu Gln Pro Trp	
	395	400	405
Lys His Tyr Ile	Pro Val Lys Ser Asn	Leu Ser Asp Leu Leu Glu	
	410	415	420
Lys Leu Lys Trp	Ala Lys Asp His Asp	Glu Glu Ala Lys Lys Ile	
	425	430	435
Ala Lys Ala Gly	Gln Glu Phe Ala Arg	Asn Asn Leu Met Gly Asp	
	440	445	450
Asp Ile Phe Cys	Tyr Tyr Phe Lys Leu	Phe Gln Glu Tyr Ala Asn	
	455	460	465
Leu Gln Val Ser	Glu Pro Gln Ile Arg	Glu Gly Met Lys Arg Val	
	470	475	480
Glu Pro Gln Thr	Glu Asp Asp Leu Phe	Pro Cys Thr Cys His Arg	
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Lys Lys Thr Lys	Asp Glu Leu		
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<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 41
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<210> 42
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 42
cgataagctg ctacagtgcc atcg 24

<210> 43
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
gtgactgtcc tctgcaagat agtgcagcct ggctacggga 40

<210> 44
<211> 2395
<212> DNA
<213> Homo Sapien

<400> 44
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 aaccctgcac agccctcatc ccctcttggc ttgagccgtc agaggccctg 2200
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 ttctctggag ccaggatgat ctgtgccacg cttgcacctc gggcccatct 2300
 gggctcatgc tctctctcct gctattgaat tagtacctag ctgcacacag 2350
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<210> 45

<211> 310

<212> PRT

<213> Homo Sapien

<400> 45

Met	Arg	Leu	Gly	Ser	Gly	Thr	Phe	Ala	Thr	Cys	Cys	Val	Ala	Ile	1	5	10	15
Glu	Val	Leu	Gly	Ile	Ala	Val	Phe	Leu	Arg	Gly	Phe	Phe	Pro	Ala	20	25	30	
Pro	Val	Arg	Ser	Ser	Ala	Arg	Ala	Glu	His	Gly	Ala	Glu	Pro	Pro	35	40	45	
Ala	Pro	Glu	Pro	Ser	Ala	Gly	Ala	Ser	Ser	Asn	Trp	Thr	Thr	Leu	50	55	60	
Pro	Pro	Pro	Leu	Phe	Ser	Lys	Val	Val	Ile	Val	Leu	Ile	Asp	Ala	65	70	75	
Leu	Arg	Asp	Asp	Phe	Val	Phe	Gly	Ser	Lys	Gly	Val	Lys	Phe	Met	80	85	90	
Pro	Tyr	Thr	Thr	Tyr	Leu	Val	Glu	Lys	Gly	Ala	Ser	His	Ser	Phe	95	100	105	
Val	Ala	Glu	Ala	Lys	Pro	Pro	Thr	Val	Thr	Met	Pro	Arg	Ile	Lys	110	115	120	
Ala	Leu	Met	Thr	Gly	Ser	Leu	Pro	Gly	Phe	Val	Asp	Val	Ile	Arg	125	130	135	
Asn	Leu	Asn	Ser	Pro	Ala	Leu	Leu	Glu	Asp	Ser	Val	Ile	Arg	Gln	140	145	150	
Ala	Lys	Ala	Ala	Gly	Lys	Arg	Ile	Val	Phe	Tyr	Gly	Asp	Glu	Thr	155	160	165	
Trp	Val	Lys	Leu	Phe	Pro	Lys	His	Phe	Val	Glu	Tyr	Asp	Gly	Thr	170	175	180	

Thr	Ser	Phe	Phe	Val	Ser	Asp	Tyr	Thr	Glu	Val	Asp	Asn	Asn	Val
				185					190					195
Thr	Arg	His	Leu	Asp	Lys	Val	Leu	Lys	Arg	Gly	Asp	Trp	Asp	Ile
				200					205					210
Leu	Ile	Leu	His	Tyr	Leu	Gly	Leu	Asp	His	Ile	Gly	His	Ile	Ser
				215					220					225
Gly	Pro	Asn	Ser	Pro	Leu	Ile	Gly	Gln	Lys	Leu	Ser	Glu	Met	Asp
				230					235					240
Ser	Val	Leu	Met	Lys	Ile	His	Thr	Ser	Leu	Gln	Ser	Lys	Glu	Arg
				245					250					255
Glu	Thr	Pro	Leu	Pro	Asn	Leu	Leu	Val	Leu	Cys	Gly	Asp	His	Gly
				260					265					270
Met	Ser	Glu	Thr	Gly	Ser	His	Gly	Ala	Ser	Ser	Thr	Glu	Glu	Val
				275					280					285
Asn	Thr	Pro	Leu	Ile	Leu	Ile	Ser	Ser	Ala	Phe	Glu	Arg	Lys	Pro
				290					295					300
Gly	Asp	Ile	Arg	His	Pro	Lys	His	Val	Gln					
				305					310					

<210> 46

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

cgggactttc gctacctggt gc 22

<210> 47

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 47

catcatattc cacaaaatgc tttggg 26

<210> 48

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ccttcgggga ttcttcccgg ctcccgttcg ttcctctg 38

<210> 49

<211> 918

<212> DNA

<213> Homo Sapien

<400> 49

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cacacctact ttggcccctt tgacctcagg gccatgaagc tgcccagcat 200
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gccgagtgtt acgcctgtat cgggggtccac caggatgact gcgctatcgg 500
cagggtccga cgagtccagt gtcaccagga ccagaccgcc tgcttcagg 550
gcagtggcag aatgacagtt ggcaatttct cagtccctgt gtacatcaga 600
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gcactacagg tcttggccct gtcctccca gtcctcctgc tgggtggggt 800
ctcagcatag accgcccctc caggatgtg gggacagggc tcacacacct 850
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aaagtaagaa ttgcaaaa 918

<210> 50

<211> 251

<212> PRT

<213> Homo Sapien

<400> 50

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Ala	Ala	Leu	Cys	Leu	Thr	Gly	Ser	Gln	Ala	Leu	Gln	Cys	Tyr	Ser
				20				25					30	

Phe	Glu	His	Thr	Tyr	Phe	Gly	Pro	Phe	Asp	Leu	Arg	Ala	Met	Lys
				35					40					45
Leu	Pro	Ser	Ile	Ser	Cys	Pro	His	Glu	Cys	Phe	Glu	Ala	Ile	Leu
				50					55					60
Ser	Leu	Asp	Thr	Gly	Tyr	Arg	Ala	Pro	Val	Thr	Leu	Val	Arg	Lys
				65					70					75
Gly	Cys	Trp	Thr	Gly	Pro	Pro	Ala	Gly	Gln	Thr	Gln	Ser	Asn	Pro
				80					85					90
Asp	Ala	Leu	Pro	Pro	Asp	Tyr	Ser	Val	Val	Arg	Gly	Cys	Thr	Thr
				95					100					105
Asp	Lys	Cys	Asn	Ala	His	Leu	Met	Thr	His	Asp	Ala	Leu	Pro	Asn
				110					115					120
Leu	Ser	Gln	Ala	Pro	Asp	Pro	Pro	Thr	Leu	Ser	Gly	Ala	Glu	Cys
				125					130					135
Tyr	Ala	Cys	Ile	Gly	Val	His	Gln	Asp	Asp	Cys	Ala	Ile	Gly	Arg
				140					145					150
Ser	Arg	Arg	Val	Gln	Cys	His	Gln	Asp	Gln	Thr	Ala	Cys	Phe	Gln
				155					160					165
Gly	Ser	Gly	Arg	Met	Thr	Val	Gly	Asn	Phe	Ser	Val	Pro	Val	Tyr
				170					175					180
Ile	Arg	Thr	Cys	His	Arg	Pro	Ser	Cys	Thr	Thr	Glu	Gly	Thr	Thr
				185					190					195
Ser	Pro	Trp	Thr	Ala	Ile	Asp	Leu	Gln	Gly	Ser	Cys	Cys	Glu	Gly
				200					205					210
Tyr	Leu	Cys	Asn	Arg	Lys	Ser	Met	Thr	Gln	Pro	Phe	Thr	Ser	Ala
				215					220					225
Ser	Ala	Thr	Thr	Pro	Pro	Arg	Ala	Leu	Gln	Val	Leu	Ala	Leu	Leu
				230					235					240
Leu	Pro	Val	Leu	Leu	Leu	Val	Gly	Leu	Ser	Ala				
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<210> 51
 <211> 3288
 <212> DNA
 <213> Homo Sapien

<400> 51
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 tgcagggttt cctactgctg ttcttttatg ctgggagctg tggctgtaac 150
 caactaggaa ataacgtatg cagcagctat ggctgtcaga gagttgtgct 200

tcccaagaca aaggcaagtc ctgtttcttt ttcttttttg gggagtgtcc 250
 ttggcagggt ctgggttttg acgttattcg gtgactgagg aaacagagaa 300
 aggatccttt gtggtcaatc tggcaaagga tctgggacta gcagaggggg 350
 agctggctgc aagggaacc aggggtggtt ccgatgataa caaacaatac 400
 ctgctcctgg attcacatac cgggaatttg ctcacaaatg agaaactgga 450
 ccgagagaag ctgtgtggcc ctaaagagcc ctgtatgctg tatttccaaa 500
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<210> 52
 <211> 800
 <212> PRT
 <213> Homo Sapien

<400> 52
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 20 25 30
 Gly Arg Tyr Ser Val Thr Glu Glu Thr Glu Lys Gly Ser Phe Val
 35 40 45
 Val Asn Leu Ala Lys Asp Leu Gly Leu Ala Glu Gly Glu Leu Ala
 50 55 60
 Ala Arg Gly Thr Arg Val Val Ser Asp Asp Asn Lys Gln Tyr Leu
 65 70 75
 Leu Leu Asp Ser His Thr Gly Asn Leu Leu Thr Asn Glu Lys Leu
 80 85 90
 Asp Arg Glu Lys Leu Cys Gly Pro Lys Glu Pro Cys Met Leu Tyr
 95 100 105
 Phe Gln Ile Leu Met Asp Asp Pro Phe Gln Ile Tyr Arg Ala Glu
 110 115 120
 Leu Arg Val Arg Asp Ile Asn Asp His Ala Pro Val Phe Gln Asp
 125 130 135
 Lys Glu Thr Val Leu Lys Ile Ser Glu Asn Thr Ala Glu Gly Thr
 140 145 150
 Ala Phe Arg Leu Glu Arg Ala Gln Asp Pro Asp Gly Gly Leu Asn
 155 160 165
 Gly Ile Gln Asn Tyr Thr Ile Ser Pro Asn Ser Phe Phe His Ile
 170 175 180
 Asn Ile Ser Gly Gly Asp Glu Gly Met Ile Tyr Pro Glu Leu Val
 185 190 195
 Leu Asp Lys Ala Leu Asp Arg Glu Glu Gln Gly Glu Leu Ser Leu
 200 205 210
 Thr Leu Thr Ala Leu Asp Gly Gly Ser Pro Ser Arg Ser Gly Thr
 215 220 225

Ser Thr Val Arg	Ile Val Val Leu Asp	Val Asn Asp Asn Ala Pro	230	235	240
Gln Phe Ala Gln	Ala Leu Tyr Glu Thr	Gln Ala Pro Glu Asn Ser	245	250	255
Pro Ile Gly Phe	Leu Ile Val Lys Val	Trp Ala Glu Asp Val Asp	260	265	270
Ser Gly Val Asn	Ala Glu Val Ser Tyr	Ser Phe Phe Asp Ala Ser	275	280	285
Glu Asn Ile Arg	Thr Thr Phe Gln Ile	Asn Pro Phe Ser Gly Glu	290	295	300
Ile Phe Leu Arg	Glu Leu Leu Asp Tyr	Glu Leu Val Asn Ser Tyr	305	310	315
Lys Ile Asn Ile	Gln Ala Met Asp Gly	Gly Gly Leu Ser Ala Arg	320	325	330
Cys Arg Val Leu	Val Glu Val Leu Asp	Thr Asn Asp Asn Pro Pro	335	340	345
Glu Leu Ile Val	Ser Ser Phe Ser Asn	Ser Val Ala Glu Asn Ser	350	355	360
Pro Glu Thr Pro	Leu Ala Val Phe Lys	Ile Asn Asp Arg Asp Ser	365	370	375
Gly Glu Asn Gly	Lys Met Val Cys Tyr	Ile Gln Glu Asn Leu Pro	380	385	390
Phe Leu Leu Lys	Pro Ser Val Glu Asn	Phe Tyr Ile Leu Ile Thr	395	400	405
Glu Gly Ala Leu	Asp Arg Glu Ile Arg	Ala Glu Tyr Asn Ile Thr	410	415	420
Ile Thr Val Thr	Asp Leu Gly Thr Pro	Arg Leu Lys Thr Glu His	425	430	435
Asn Ile Thr Val	Leu Val Ser Asp Val	Asn Asp Asn Ala Pro Ala	440	445	450
Phe Thr Gln Thr	Ser Tyr Thr Leu Phe	Val Arg Glu Asn Asn Ser	455	460	465
Pro Ala Leu His	Ile Gly Ser Val Ser	Ala Thr Asp Arg Asp Ser	470	475	480
Gly Thr Asn Ala	Gln Val Thr Tyr Ser	Leu Leu Pro Pro Gln Asp	485	490	495
Pro His Leu Pro	Leu Ala Ser Leu Val	Ser Ile Asn Ala Asp Asn	500	505	510
Gly His Leu Phe	Ala Leu Arg Ser Leu	Asp Tyr Glu Ala Leu Gln			

	515		520		525
Ala Phe Glu Phe Arg Val Gly Ala Thr Asp Arg Gly Ser Pro Ala	530		535		540
Leu Ser Arg Glu Ala Leu Val Arg Val Leu Val Leu Asp Ala Asn	545		550		555
Asp Asn Ser Pro Phe Val Leu Tyr Pro Leu Gln Asn Gly Ser Ala	560		565		570
Pro Cys Thr Glu Leu Val Pro Arg Ala Ala Glu Pro Gly Tyr Leu	575		580		585
Val Thr Lys Val Val Ala Val Asp Gly Asp Ser Gly Gln Asn Ala	590		595		600
Trp Leu Ser Tyr Gln Leu Leu Lys Ala Thr Glu Pro Gly Leu Phe	605		610		615
Gly Val Trp Ala His Asn Gly Glu Val Arg Thr Ala Arg Leu Leu	620		625		630
Ser Glu Arg Asp Ala Ala Lys His Arg Leu Val Val Leu Val Lys	635		640		645
Asp Asn Gly Glu Pro Pro Arg Ser Ala Thr Ala Thr Leu His Leu	650		655		660
Leu Leu Val Asp Gly Phe Ser Gln Pro Tyr Leu Pro Leu Pro Glu	665		670		675
Ala Ala Pro Ala Gln Ala Gln Ala Glu Ala Asp Leu Leu Thr Val	680		685		690
Tyr Leu Val Val Ala Leu Ala Ser Val Ser Ser Leu Phe Leu Leu	695		700		705
Ser Val Leu Leu Phe Val Ala Val Arg Leu Cys Arg Arg Ser Arg	710		715		720
Ala Ala Ser Val Gly Arg Cys Ser Val Pro Glu Gly Pro Phe Pro	725		730		735
Gly His Leu Val Asp Val Arg Gly Ala Glu Thr Leu Ser Gln Ser	740		745		750
Tyr Gln Tyr Glu Val Cys Leu Thr Gly Gly Pro Gly Thr Ser Glu	755		760		765
Phe Lys Phe Leu Lys Pro Val Ile Ser Asp Ile Gln Ala Gln Gly	770		775		780
Pro Gly Arg Lys Gly Glu Glu Asn Ser Thr Phe Arg Asn Ser Phe	785		790		795
Gly Phe Asn Ile Gln	800				

<210> 53
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
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<210> 54
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
cagcatacag ggctcttttag ggcacac 27

<210> 55
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
cggtgactga ggaaacagag aaaggatcct ttgtgggtcaa tctggc 46

<210> 56
<211> 2242
<212> DNA
<213> Homo Sapien

<220>
<221> unsure
<222> 2181
<223> unknown base

<400> 56
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gagatattta atgtcaccct cttgggggctt tcatgggact ccctctgcca 150
catttttttg aggttgggaa agttgctaga ggcttcagaa ctccagccta 200
atggatocca aactcgggag aatggctgcg tccctgctgg ctgtgctgct 250
gctgctgctg gagcgcgga tggtctctc accctccccg cccccggcgc 300
tgtagagaa agtcttcag tacattgacc tccatcagga tgaatttgct 350

cagacgctga aggagtgggt ggccatcgag agcgactctg tccagcctgt 400
gcctcgcttc agacaagagc tcttcagaat gatggccgtg gctgcggaca 450
cgctgcagcg cctggggggc cgtgtggcct cggtgacat gggtcctcag 500
cagctgcccg atggtcagag tcttccaata cctcccgtca tcctggccga 550
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 2242

<210> 57

<211> 507

<212> PRT

<213> Homo Sapien

<400> 57

Met	Asp	Pro	Lys	Leu	Gly	Arg	Met	Ala	Ala	Ser	Leu	Leu	Ala	Val	1	5	10	15
Leu	Leu	Leu	Leu	Leu	Glu	Arg	Gly	Met	Phe	Ser	Ser	Pro	Ser	Pro	20	25	30	
Pro	Pro	Ala	Leu	Leu	Glu	Lys	Val	Phe	Gln	Tyr	Ile	Asp	Leu	His	35	40	45	
Gln	Asp	Glu	Phe	Val	Gln	Thr	Leu	Lys	Glu	Trp	Val	Ala	Ile	Glu	50	55	60	
Ser	Asp	Ser	Val	Gln	Pro	Val	Pro	Arg	Phe	Arg	Gln	Glu	Leu	Phe	65	70	75	
Arg	Met	Met	Ala	Val	Ala	Ala	Asp	Thr	Leu	Gln	Arg	Leu	Gly	Ala	80	85	90	
Arg	Val	Ala	Ser	Val	Asp	Met	Gly	Pro	Gln	Gln	Leu	Pro	Asp	Gly	95	100	105	
Gln	Ser	Leu	Pro	Ile	Pro	Pro	Val	Ile	Leu	Ala	Glu	Leu	Gly	Ser	110	115	120	
Asp	Pro	Thr	Lys	Gly	Thr	Val	Cys	Phe	Tyr	Gly	His	Leu	Asp	Val	125	130	135	
Gln	Pro	Ala	Asp	Arg	Gly	Asp	Gly	Trp	Leu	Thr	Asp	Pro	Tyr	Val	140	145	150	
Leu	Thr	Glu	Val	Asp	Gly	Lys	Leu	Tyr	Gly	Arg	Gly	Ala	Thr	Asp	155	160	165	
Asn	Lys	Gly	Pro	Val	Leu	Ala	Trp	Ile	Asn	Ala	Val	Ser	Ala	Phe				

	170	175	180
Arg Ala Leu Glu	Gln Asp Leu Pro Val	Asn Ile Lys Phe Ile	Ile
	185	190	195
Glu Gly Met Glu	Glu Ala Gly Ser Val	Ala Leu Glu Glu Leu	Val
	200	205	210
Glu Lys Glu Lys	Asp Arg Phe Phe Ser	Gly Val Asp Tyr Ile	Val
	215	220	225
Ile Ser Asp Asn	Leu Trp Ile Ser Gln	Arg Lys Pro Ala Ile	Thr
	230	235	240
Tyr Gly Thr Arg	Gly Asn Ser Tyr Phe	Met Val Glu Val Lys	Cys
	245	250	255
Arg Asp Gln Asp	Phe His Ser Gly Thr	Phe Gly Gly Ile Leu	His
	260	265	270
Glu Pro Met Ala	Asp Leu Val Ala Leu	Leu Gly Ser Leu Val	Asp
	275	280	285
Ser Ser Gly His	Ile Leu Val Pro Gly	Ile Tyr Asp Glu Val	Val
	290	295	300
Pro Leu Thr Glu	Glu Glu Ile Asn Thr	Tyr Lys Ala Ile His	Leu
	305	310	315
Asp Leu Glu Glu	Tyr Arg Asn Ser Ser	Arg Val Glu Lys Phe	Leu
	320	325	330
Phe Asp Thr Lys	Glu Glu Ile Leu Met	His Leu Trp Arg Tyr	Pro
	335	340	345
Ser Leu Ser Ile	His Gly Ile Glu Gly	Ala Phe Asp Glu Pro	Gly
	350	355	360
Thr Lys Thr Val	Ile Pro Gly Arg Val	Ile Gly Lys Phe Ser	Ile
	365	370	375
Arg Leu Val Pro	His Met Asn Val Ser	Ala Val Glu Lys Gln	Val
	380	385	390
Thr Arg His Leu	Glu Asp Val Phe Ser	Lys Arg Asn Ser Ser	Asn
	395	400	405
Lys Met Val Val	Ser Met Thr Leu Gly	Leu His Pro Trp Ile	Ala
	410	415	420
Asn Ile Asp Asp	Thr Gln Tyr Leu Ala	Ala Lys Arg Ala Ile	Arg
	425	430	435
Thr Val Phe Gly	Thr Glu Pro Asp Met	Ile Arg Asp Gly Ser	Thr
	440	445	450
Ile Pro Ile Ala	Lys Met Phe Gln Glu	Ile Val His Lys Ser	Val
	455	460	465

Val Leu Ile Pro Leu Gly Ala Val Asp Asp Gly Glu His Ser Gln
470 475 480

Asn Glu Lys Ile Asn Arg Trp Asn Tyr Ile Glu Gly Thr Lys Leu
485 490 495

Phe Ala Ala Phe Phe Leu Glu Met Ala Gln Leu His
500 505

<210> 58
<211> 1470
<212> DNA
<213> Homo Sapien

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ctttgtcatg ggacctgtgc ggttgggaat attgcttttc ctttttttg 150
ccgtgcacga ggcttgggct gggatgttga aggaggagga cgatgacaca 200
gaacgcttgc ccagcaaattg cgaagtgtgt aagctgctga gcacagagct 250
acaggcgga ctgagtcgca ccggtcgatc tcgagaggtg ctggagctgg 300
ggcaggtgct ggatacaggc aagaggaaga gacacgtgcc ttacagcgtt 350
tcagagacaa ggctggaaga ggccttagag aatttatgtg agcggtatcct 400
ggactatagt gtccacgctg agcgcaaggg ctactgaga tatgccaagg 450
gtcagagtca gaccatggca aactgaaag gcctagtga gaagggggtg 500
aaggtggatc tggggatccc tctggagctt tgggatgagc ccagcgtgga 550
ggtcacatac ctcaagaagc agtgtgagac catgttggag gagtttgaag 600
acattgtggg agactggtac ttccaccatc aggagcagcc cctacaaaat 650
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 cagcaaaccg tgaaggagaa tgggacactg ggtcatggcc tggagttgct 1350
 gataatttag gtgggataga tacttggctt acttaagctc aatgtaacct 1400
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 aacttttttc tttttttcta 1470

<210> 59

<211> 248

<212> PRT

<213> Homo Sapien

<400> 59

Met	Gly	Pro	Val	Arg	Leu	Gly	Ile	Leu	Leu	Phe	Leu	Phe	Leu	Ala	1	5	10	15
Val	His	Glu	Ala	Trp	Ala	Gly	Met	Leu	Lys	Glu	Glu	Asp	Asp	Asp	20	25	30	
Thr	Glu	Arg	Leu	Pro	Ser	Lys	Cys	Glu	Val	Cys	Lys	Leu	Leu	Ser	35	40	45	
Thr	Glu	Leu	Gln	Ala	Glu	Leu	Ser	Arg	Thr	Gly	Arg	Ser	Arg	Glu	50	55	60	
Val	Leu	Glu	Leu	Gly	Gln	Val	Leu	Asp	Thr	Gly	Lys	Arg	Lys	Arg	65	70	75	
His	Val	Pro	Tyr	Ser	Val	Ser	Glu	Thr	Arg	Leu	Glu	Glu	Ala	Leu	80	85	90	
Glu	Asn	Leu	Cys	Glu	Arg	Ile	Leu	Asp	Tyr	Ser	Val	His	Ala	Glu	95	100	105	
Arg	Lys	Gly	Ser	Leu	Arg	Tyr	Ala	Lys	Gly	Gln	Ser	Gln	Thr	Met	110	115	120	
Ala	Thr	Leu	Lys	Gly	Leu	Val	Gln	Lys	Gly	Val	Lys	Val	Asp	Leu	125	130	135	
Gly	Ile	Pro	Leu	Glu	Leu	Trp	Asp	Glu	Pro	Ser	Val	Glu	Val	Thr	140	145	150	
Tyr	Leu	Lys	Lys	Gln	Cys	Glu	Thr	Met	Leu	Glu	Glu	Phe	Glu	Asp	155	160	165	
Ile	Val	Gly	Asp	Trp	Tyr	Phe	His	His	Gln	Glu	Gln	Pro	Leu	Gln	170	175	180	

Asn	Phe	Leu	Cys	Glu	Gly	His	Val	Leu	Pro	Ala	Ala	Glu	Thr	Ala
				185					190					195
Cys	Leu	Gln	Glu	Thr	Trp	Thr	Gly	Lys	Glu	Ile	Thr	Asp	Gly	Glu
				200					205					210
Glu	Lys	Thr	Glu	Gly	Glu	Glu	Glu	Gln	Glu	Glu	Glu	Glu	Glu	Glu
				215					220					225
Glu	Glu	Glu	Glu	Gly	Gly	Asp	Lys	Met	Thr	Lys	Thr	Gly	Ser	His
				230					235					240
Pro	Lys	Leu	Asp	Arg	Glu	Asp	Leu							
				245										

<210> 60

<211> 890

<212> DNA

<213> Homo Sapien

<400> 60

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tggagacgag gatgagaaca gcccggtgtgc ccatgaggcc ctcttggacg 200
aggacaccct cttttgccag ggccttgaag ttttctaccc agagttgggg 250
aacattggct gcaaggttgt tcctgattgt aacaactaca gacagaagat 300
cacctoctgg atggagccga tagtcaagtt cccggggggcc gtggacggcg 350
caacctatat cctgggtgatg gtggatccag atgccctag cagagcagaa 400
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cgacctgaag aaaggaaga ttcagggcca ggagttatca gcctaccagg 500
ctccctcccc accggcacac agtggccttc atcgctacca gttctttgtc 550
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tcgaggctct tggaaaatgg acagatttct gaaccgcttc cacctgggcg 650
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gcagagatag ctgcctgcta gatagccggc ttgcatcc ggcatgtg 800
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gaaccccttc ttttccaaat taataaaaaa aatcatcaaa 890

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<210> 61

<211> 223
 <212> PRT
 <213> Homo Sapien

<400> 61

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Leu	Met	Met	Val	Val	Thr	Gly	Asp	Glu	Asp	Glu	Asn	Ser	Pro	Cys	20	25	30	
Ala	His	Glu	Ala	Leu	Leu	Asp	Glu	Asp	Thr	Leu	Phe	Cys	Gln	Gly	35	40	45	
Leu	Glu	Val	Phe	Tyr	Pro	Glu	Leu	Gly	Asn	Ile	Gly	Cys	Lys	Val	50	55	60	
Val	Pro	Asp	Cys	Asn	Asn	Tyr	Arg	Gln	Lys	Ile	Thr	Ser	Trp	Met	65	70	75	
Glu	Pro	Ile	Val	Lys	Phe	Pro	Gly	Ala	Val	Asp	Gly	Ala	Thr	Tyr	80	85	90	
Ile	Leu	Val	Met	Val	Asp	Pro	Asp	Ala	Pro	Ser	Arg	Ala	Glu	Pro	95	100	105	
Arg	Gln	Arg	Phe	Trp	Arg	His	Trp	Leu	Val	Thr	Asp	Ile	Lys	Gly	110	115	120	
Ala	Asp	Leu	Lys	Lys	Gly	Lys	Ile	Gln	Gly	Gln	Glu	Leu	Ser	Ala	125	130	135	
Tyr	Gln	Ala	Pro	Ser	Pro	Pro	Ala	His	Ser	Gly	Phe	His	Arg	Tyr	140	145	150	
Gln	Phe	Phe	Val	Tyr	Leu	Gln	Glu	Gly	Lys	Val	Ile	Ser	Leu	Leu	155	160	165	
Pro	Lys	Glu	Asn	Lys	Thr	Arg	Gly	Ser	Trp	Lys	Met	Asp	Arg	Phe	170	175	180	
Leu	Asn	Arg	Phe	His	Leu	Gly	Glu	Pro	Glu	Ala	Ser	Thr	Gln	Phe	185	190	195	
Met	Thr	Gln	Asn	Tyr	Gln	Asp	Ser	Pro	Thr	Leu	Gln	Ala	Pro	Arg	200	205	210	
Gly	Arg	Ala	Ser	Glu	Pro	Lys	His	Lys	Thr	Arg	Gln	Arg	215	220				

<210> 62
 <211> 1321
 <212> DNA
 <213> Homo Sapien

<400> 62

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 tcactgttgc tgttatcaca tgcaagtatc cagaggctct tgagcaaggc 200
 agaggggatac ccatttattt gggaatccag aatccagaaa tgtgtttgta 250
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 actcagccta gaggtggcag cttggtcttt gtcttaaagt ttctggttcc 550
 caatgtgttt tcgtctacat tttcttagtg tcattttcac gctggtgctg 600
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 caattacttc atagcaactg aagaacagga tgtggcctca gaagcaggag 700
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 tgtgtaatag aaccttctta gcattaagac cttgtaaaca aaaataattc 1200
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<210> 63
 <211> 134
 <212> PRT
 <213> Homo Sapien
 <400> 63

Met	Arg	Gly	Thr	Pro	Gly	Asp	Ala	Asp	Gly	Gly	Gly	Arg	Ala	Val	1	5	10	15
Tyr	Gln	Ser	Ile	Thr	Val	Ala	Val	Ile	Thr	Cys	Lys	Tyr	Pro	Glu	20	25	30	
Ala	Leu	Glu	Gln	Gly	Arg	Gly	Asp	Pro	Ile	Tyr	Leu	Gly	Ile	Gln	35	40	45	
Asn	Pro	Glu	Met	Cys	Leu	Tyr	Cys	Glu	Lys	Val	Gly	Glu	Gln	Pro	50	55	60	
Thr	Leu	Gln	Leu	Lys	Glu	Gln	Lys	Ile	Met	Asp	Leu	Tyr	Gly	Gln	65	70	75	
Pro	Glu	Pro	Val	Lys	Pro	Phe	Leu	Phe	Tyr	Arg	Ala	Lys	Thr	Gly	80	85	90	
Arg	Thr	Ser	Thr	Leu	Glu	Ser	Val	Ala	Phe	Pro	Asp	Trp	Phe	Ile	95	100	105	
Ala	Ser	Ser	Lys	Arg	Asp	Gln	Pro	Ile	Ile	Leu	Thr	Ser	Glu	Leu	110	115	120	
Gly	Lys	Ser	Tyr	Asn	Thr	Ala	Phe	Glu	Leu	Asn	Ile	Asn	Asp	125	130			

<210> 64
 <211> 999
 <212> DNA
 <213> Homo Sapien

<400> 64
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<210> 65
 <211> 136
 <212> PRT
 <213> Homo Sapien

<400> 65
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 20 25 30
 Met Arg Ala Leu Ser Gln Glu Ile Thr Arg Asp Phe Asn Leu Leu
 35 40 45
 Gln Val Ser Glu Pro Ser Glu Pro Cys Val Arg Tyr Leu Pro Arg
 50 55 60
 Leu Tyr Leu Asp Ile His Asn Tyr Cys Val Leu Asp Lys Leu Arg
 65 70 75
 Asp Phe Val Ala Ser Pro Pro Cys Trp Lys Val Ala Gln Val Asp
 80 85 90
 Ser Leu Lys Asp Lys Ala Arg Lys Leu Tyr Thr Ile Met Asn Ser
 95 100 105
 Phe Cys Arg Arg Asp Leu Val Phe Leu Leu Asp Asp Cys Asn Ala
 110 115 120
 Leu Glu Tyr Pro Ile Pro Val Thr Thr Val Leu Pro Asp Arg Gln
 125 130 135

Arg

<210> 66
 <211> 1893
 <212> DNA
 <213> Homo Sapien

<400> 66
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ccccacaccc accctcctgg ctcttcctgt ttttactcct ccttttcatt 200
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<210> 67

<211> 468

<212> PRT

<213> Homo Sapien

<400> 67

Met	Gly	Phe	Leu	Gly	Thr	Gly	Thr	Trp	Ile	Leu	Val	Leu	Val	Leu	1	5	10	15
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Leu	His	Asn	Arg	Glu	Leu	Ser	Ala	Glu	Arg	Pro	Leu	Asn	Glu	Gln	35	40	45	
Ile	Ala	Glu	Ala	Glu	Glu	Asp	Lys	Ile	Lys	Lys	Thr	Tyr	Pro	Pro	50	55	60	
Glu	Asn	Lys	Pro	Gly	Gln	Ser	Asn	Tyr	Ser	Phe	Val	Asp	Asn	Leu	65	70	75	
Asn	Leu	Leu	Lys	Ala	Ile	Thr	Glu	Lys	Glu	Lys	Ile	Glu	Lys	Glu	80	85	90	
Arg	Gln	Ser	Ile	Arg	Ser	Ser	Pro	Leu	Asp	Asn	Lys	Leu	Asn	Val	95	100	105	
Glu	Asp	Val	Asp	Ser	Thr	Lys	Asn	Arg	Lys	Leu	Ile	Asp	Asp	Tyr	110	115	120	
Asp	Ser	Thr	Lys	Ser	Gly	Leu	Asp	His	Lys	Phe	Gln	Asp	Asp	Pro	125	130	135	
Asp	Gly	Leu	His	Gln	Leu	Asp	Gly	Thr	Pro	Leu	Thr	Ala	Glu	Asp	140	145	150	
Ile	Val	His	Lys	Ile	Ala	Ala	Arg	Ile	Tyr	Glu	Glu	Asn	Asp	Arg	155	160	165	
Ala	Val	Phe	Asp	Lys	Ile	Val	Ser	Lys	Leu	Leu	Asn	Leu	Gly	Leu	170	175	180	

Ile Thr Glu Ser	Gln Ala His Thr Leu	Glu Asp Glu Val Ala Glu	185	190	195
Val Leu Gln Lys	Leu Ile Ser Lys Glu	Ala Asn Asn Tyr Glu Glu	200	205	210
Asp Pro Asn Lys	Pro Thr Ser Trp Thr	Glu Asn Gln Ala Gly Lys	215	220	225
Ile Pro Glu Lys	Val Thr Pro Met Ala	Ala Ile Gln Asp Gly Leu	230	235	240
Ala Lys Gly Glu	Asn Asp Glu Thr Val	Ser Asn Thr Leu Thr Leu	245	250	255
Thr Asn Gly Leu	Glu Arg Arg Thr Lys	Thr Tyr Ser Glu Asp Asn	260	265	270
Phe Glu Glu Leu	Gln Tyr Phe Pro Asn	Phe Tyr Ala Leu Leu Lys	275	280	285
Ser Ile Asp Ser	Glu Lys Glu Ala Lys	Glu Lys Glu Thr Leu Ile	290	295	300
Thr Ile Met Lys	Thr Leu Ile Asp Phe	Val Lys Met Met Val Lys	305	310	315
Tyr Gly Thr Ile	Ser Pro Glu Glu Gly	Val Ser Tyr Leu Glu Asn	320	325	330
Leu Asp Glu Met	Ile Ala Leu Gln Thr	Lys Asn Lys Leu Glu Lys	335	340	345
Asn Ala Thr Asp	Asn Ile Ser Lys Leu	Phe Pro Ala Pro Ser Glu	350	355	360
Lys Ser His Glu	Glu Thr Asp Ser Thr	Lys Glu Glu Ala Ala Lys	365	370	375
Met Glu Lys Glu	Tyr Gly Ser Leu Lys	Asp Ser Thr Lys Asp Asp	380	385	390
Asn Ser Asn Pro	Gly Gly Lys Thr Asp	Glu Pro Lys Gly Lys Thr	395	400	405
Glu Ala Tyr Leu	Glu Ala Ile Arg Lys	Asn Ile Glu Trp Leu Lys	410	415	420
Lys His Asp Lys	Lys Gly Asn Lys Glu	Asp Tyr Asp Leu Ser Lys	425	430	435
Met Arg Asp Phe	Ile Asn Lys Gln Ala	Asp Ala Tyr Val Glu Lys	440	445	450
Gly Ile Leu Asp	Lys Glu Glu Ala Glu	Ala Ile Lys Arg Ile Tyr	455	460	465
Ser Ser Leu					

<210> 68
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 68
cgtcacagga acttcagcac cc 22

<210> 69
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 69
gtcttggtt cctccaggtt tgg 23

<210> 70
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 70
ggacagcgct cccctctacc tggagacttg actcccg 38

<210> 71
<211> 2379
<212> DNA
<213> Homo Sapien

<400> 71
gttgctccgg cggcgctcgg ggagggagcc agcagcctag ggcctaggcc 50
cgggccacca tggcgctgcc tccaggccca gccgccctcc ggcacacact 100
gctgctcctg ccagcccttc tgagctcagg ttggggggag ttggagccac 150
aaatagatgg tcagacctgg gctgagcggg cacttcggga gaatgaacgc 200
cacgccttca cctgccgggt ggcagggggg cctggcacc cagattggc 250
ctggtatctg gatggacagc tgcaggaggc cagcacctca agactgctga 300
gcgtgggagg ggaggccttc tctggaggca ccagcacctt cactgtcact 350
gcccatcggg cccagcatga gctcaactgc tctctgcagg accccagaag 400
tggccgatca gccaacgcct ctgtatcct taatgtgcaa ttcaagccag 450

agattgccca agtcggcgcc aagtaccagg aagctcaggg cccaggcctc 500
 ctggttgtec tgtttgccct ggtgcgtgcc aaccgcggg ccaatgtcac 550
 ctggatcgac caggatgggc cagtgactgt caacacctct gacttccttg 600
 tgctggatgc gcagaactac ccctggctca ccaaccacac ggtgcagctg 650
 cagctccgca gcttggcaca caacctctcg gtggtggcca ccaatgacgt 700
 ggggtgcacc agtgcgtcgc ttccagcccc agggccctcc cggcacccat 750
 ctctgatatc aagtgactcc aacaacctaa aactcaacaa cgtgcgcctg 800
 ccacgggaga acatgtccct cccgtccaac cttcagctca atgacctcac 850
 tccagattcc agagcagtga aaccagcaga ccggcagatg gtcagaaca 900
 acagccggcc agagcttctg gacccggagc ccggcggcct cctcaccagc 950
 caaggtttca tccgcctccc agtgctgggc tatatctatc gagtgtccag 1000
 cgtgagcagt gatgagatct ggctctgagc cgagggcgag acaggagtat 1050
 tctcttggcc tctggacacc ctcccattcc tccaaggcat cctctaccta 1100
 gctaggtcac caacgtgaag aagttatgcc actgccactt ttgcttgccc 1150
 tcctggctgg ggtgccctcc atgtcatgca cgtgatgcat ttcactgggc 1200
 tgtaaccgcg aggggcacag gtatctttgg caaggctacc agttggacgt 1250
 aagccccca tgctgactca ggggtgggcc tgcatgtgat gactgggccc 1300
 ttccagaggg agctctttgg ccaggggtgt tcagatgtca tccagcatcc 1350
 aagtgtggca tggcctgctg tataccccac ccagtactc cacagcacct 1400
 tgtacagtag gcatgggggc gtgcctgtgt gggggacagg gagggccctg 1450
 catggatttt cctccttcc atgctatgta gccttgttcc ctcaggtaaa 1500
 atttaggacc ctgctagctg tgcagaacct aattgccctt tgcacagaaa 1550
 ccaaccctg acccagcgg accggccaag cacaacgctc ctttttgctg 1600
 cacacgtctc tgccttcac ttcttctctt ctgtccccac ctctcttgg 1650
 gaattctagg ttacacgttg gaccttctct actacttcac tgggcactag 1700
 acttttctat tggcctgtgc catgcccag tattagcaca agttagggag 1750
 gaagaggcag gcgatgagtc tagtagcacc caggacggct tgtagctatg 1800
 catcattttc ctacggcggt agcactttaa gcacatcccc taggggaggg 1850
 ggtgagttag gggcccagag ccctctttgt ggcttcccca cgtttggcct 1900

tctgggattc actgtgagtg tcctgagctc tcgggggttg tggtttttct 1950
ctcagcatgt ctctccacc acgggacccc agccctgacc aacccatggt 2000
tgcctcatca gcaggaaggt gcccttcctg gaggatggtc gccacaggca 2050
cataattcaa cagtgtggaa gctttagggg aacatggaga aagaaggaga 2100
ccacataccc caaagtgacc taagaacact ttaaaaagca acatgtaaat 2150
gattggaaat taatatagta cagaatatat tttcccttg ttgagatctt 2200
cttttgtaat gtttttcatg ttactgccta gggcggtgct gagcacacag 2250
caagtttaat aaacttgact gaattcattt aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2350
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2379

<210> 72
<211> 322
<212> PRT
<213> Homo Sapien

<400> 72
Met Ala Leu Pro Pro Gly Pro Ala Ala Leu Arg His Thr Leu Leu
1 5 10 15
Leu Leu Pro Ala Leu Leu Ser Ser Gly Trp Gly Glu Leu Glu Pro
20 25 30
Gln Ile Asp Gly Gln Thr Trp Ala Glu Arg Ala Leu Arg Glu Asn
35 40 45
Glu Arg His Ala Phe Thr Cys Arg Val Ala Gly Gly Pro Gly Thr
50 55 60
Pro Arg Leu Ala Trp Tyr Leu Asp Gly Gln Leu Gln Glu Ala Ser
65 70 75
Thr Ser Arg Leu Leu Ser Val Gly Gly Glu Ala Phe Ser Gly Gly
80 85 90
Thr Ser Thr Phe Thr Val Thr Ala His Arg Ala Gln His Glu Leu
95 100 105
Asn Cys Ser Leu Gln Asp Pro Arg Ser Gly Arg Ser Ala Asn Ala
110 115 120
Ser Val Ile Leu Asn Val Gln Phe Lys Pro Glu Ile Ala Gln Val
125 130 135
Gly Ala Lys Tyr Gln Glu Ala Gln Gly Pro Gly Leu Leu Val Val
140 145 150
Leu Phe Ala Leu Val Arg Ala Asn Pro Pro Ala Asn Val Thr Trp
155 160 165

Ile	Asp	Gln	Asp	Gly	Pro	Val	Thr	Val	Asn	Thr	Ser	Asp	Phe	Leu	170	175	180
Val	Leu	Asp	Ala	Gln	Asn	Tyr	Pro	Trp	Leu	Thr	Asn	His	Thr	Val	185	190	195
Gln	Leu	Gln	Leu	Arg	Ser	Leu	Ala	His	Asn	Leu	Ser	Val	Val	Ala	200	205	210
Thr	Asn	Asp	Val	Gly	Val	Thr	Ser	Ala	Ser	Leu	Pro	Ala	Pro	Gly	215	220	225
Pro	Ser	Arg	His	Pro	Ser	Leu	Ile	Ser	Ser	Asp	Ser	Asn	Asn	Leu	230	235	240
Lys	Leu	Asn	Asn	Val	Arg	Leu	Pro	Arg	Glu	Asn	Met	Ser	Leu	Pro	245	250	255
Ser	Asn	Leu	Gln	Leu	Asn	Asp	Leu	Thr	Pro	Asp	Ser	Arg	Ala	Val	260	265	270
Lys	Pro	Ala	Asp	Arg	Gln	Met	Ala	Gln	Asn	Asn	Ser	Arg	Pro	Glu	275	280	285
Leu	Leu	Asp	Pro	Glu	Pro	Gly	Gly	Leu	Leu	Thr	Ser	Gln	Gly	Phe	290	295	300
Ile	Arg	Leu	Pro	Val	Leu	Gly	Tyr	Ile	Tyr	Arg	Val	Ser	Ser	Val	305	310	315
Ser	Ser	Asp	Glu	Ile	Trp	Leu									320		

<210> 73
 <211> 843
 <212> DNA
 <213> Homo Sapien

<400> 73
 cggggacgga agcggcccct gggcccagag ggctggagcc gggccggggc 50
 gatgtggagc gcgggccgcg gcggggctgc ctggccggtg ctgttggggc 100
 tgctgctggc gctgttagtg ccgggcggtg gtgccgcaa gaccggtgcg 150
 gagctcgtga cctgcgggtc ggtgctgaag ctgctcaata cgcaccaccg 200
 cgtgcggtg cactcgcacg acatcaaata cggatccggc agcggccagc 250
 aatcggtgac cggcgtagag gcgtcggacg acgccaatag ctactggcgg 300
 atccgcggcg gctcggaggg cgggtgcccg cgcggtccc cgggtgcgctg 350
 cgggcaggcg gtgaggctca cgcatgtgct tacgggcaag aacctgcaca 400
 cgcaccactt cccgtcgccg ctgtccaaca accaggaggt gagtgccttt 450
 ggggaagacg gcgagggcga cgacctggac ctatggacag tgcgctgctc 500

tggacagcac tgggagcgtg aggctgctgt gcgcttccag catgtgggca 550
 cctctgtgtt cctgtcagtc acgggtgagc agtatggaag ccccatccgt 600
 gggcagcatg aggtccacgg catgcccagt gccaacacgc acaatacgtg 650
 gaaggccatg gaaggcatct tcatcaagcc tagtgtggag ccctctgcag 700
 gtcacgatga actctgagtg tgtggatgga tgggtggatg gaggggtggca 750
 ggtggggcgt ctgcagggcc actcttggca gagactttgg gttttaggg 800
 gtcctcaagt gcctttgtga ttaaagaatg ttggtctatg aaa 843

<210> 74

<211> 221

<212> PRT

<213> Homo Sapien

<400> 74

Met	Trp	Ser	Ala	Gly	Arg	Gly	Gly	Ala	Ala	Trp	Pro	Val	Leu	Leu	1	5	10	15
Gly	Leu	Leu	Leu	Ala	Leu	Leu	Val	Pro	Gly	Gly	Gly	Ala	Ala	Lys	20	25	30	
Thr	Gly	Ala	Glu	Leu	Val	Thr	Cys	Gly	Ser	Val	Leu	Lys	Leu	Leu	35	40	45	
Asn	Thr	His	His	Arg	Val	Arg	Leu	His	Ser	His	Asp	Ile	Lys	Tyr	50	55	60	
Gly	Ser	Gly	Ser	Gly	Gln	Gln	Ser	Val	Thr	Gly	Val	Glu	Ala	Ser	65	70	75	
Asp	Asp	Ala	Asn	Ser	Tyr	Trp	Arg	Ile	Arg	Gly	Gly	Ser	Glu	Gly	80	85	90	
Gly	Cys	Pro	Arg	Gly	Ser	Pro	Val	Arg	Cys	Gly	Gln	Ala	Val	Arg	95	100	105	
Leu	Thr	His	Val	Leu	Thr	Gly	Lys	Asn	Leu	His	Thr	His	His	Phe	110	115	120	
Pro	Ser	Pro	Leu	Ser	Asn	Asn	Gln	Glu	Val	Ser	Ala	Phe	Gly	Glu	125	130	135	
Asp	Gly	Glu	Gly	Asp	Asp	Leu	Asp	Leu	Trp	Thr	Val	Arg	Cys	Ser	140	145	150	
Gly	Gln	His	Trp	Glu	Arg	Glu	Ala	Ala	Val	Arg	Phe	Gln	His	Val	155	160	165	
Gly	Thr	Ser	Val	Phe	Leu	Ser	Val	Thr	Gly	Glu	Gln	Tyr	Gly	Ser	170	175	180	
Pro	Ile	Arg	Gly	Gln	His	Glu	Val	His	Gly	Met	Pro	Ser	Ala	Asn	185	190	195	

Thr His Asn Thr Trp Lys Ala Met Glu Gly Ile Phe Ile Lys Pro
 200 205 210

Ser Val Glu Pro Ser Ala Gly His Asp Glu Leu
 215 220

<210> 75
 <211> 1049
 <212> DNA
 <213> Homo Sapien

<400> 75
 gttgctatgt tgcccaggct ggtcttgaag tgccttgacc tcctaaagt 50
 ttggaaccac agacgtgagc cactccaccc agcctaaaac ttcattcttct 100
 ttggatgaga tgaacacttt taacaagaga acaggactct atataaatcg 150
 ctgtgggctc accacctcta aggaggagca ctgactgaag acagaaaaat 200
 tgatgaactg aagaagacat ggtccattat gccttacaaa cttacacagt 250
 gctttgggaa ttccaaagta ctgactggag agaggtgttt caggagccgt 300
 agagccagat cgatcatcatg tctgcattgt ggctgctgct gggcctcctt 350
 gccctgatgg acttgtctga aagcagcaac tggggatgct atggaaacat 400
 ccaaagcctg gacacccctg gagcatcttg tgggattgga agacgtcacg 450
 gcctgaacta ctgtggagtt cgtgcttctg aaaggctggc tgaaatagac 500
 atgccatacc tcctgaaata tcaacccatg atgcaaacca ttggccaaaa 550
 gtactgcatg gatcctgccg tgatcgctgg tgtcttgtcc aggaagtctc 600
 ccggtgacaa aattctggtc aacatgggag ataggactag catggtgcag 650
 gaccctggct ctcaagctcc cacatcctgg attagtgagt ctcaggtttc 700
 ccagacaact gaagttctga ctactagaat caaagaaatc cagaggaggt 750
 ttccaacctg gaccctgac cagtacctga gaggtggact ctgtgcctac 800
 agtgggggtg ctggctatgt ccgaagcagc caggacctga gctgtgactt 850
 ctgcaatgat gtccttgac gagccaagta cctcaagaga catggcttct 900
 aacatctcag atgaaacca agaccatgat cacatatgca gcctcaaatg 950
 ttacacagat aaaactagcc aagggcacct gtaactggga atctgagttt 1000
 gacctaaaag tcattaaaat aacatgaatc ccattaaaaa aaaaaaaaa 1049

<210> 76
 <211> 194
 <212> PRT
 <213> Homo Sapien

<400> 76

Met	Ser	Ala	Leu	Trp	Leu	Leu	Leu	Gly	Leu	Leu	Ala	Leu	Met	Asp
1				5					10					15
Leu	Ser	Glu	Ser	Ser	Asn	Trp	Gly	Cys	Tyr	Gly	Asn	Ile	Gln	Ser
				20					25					30
Leu	Asp	Thr	Pro	Gly	Ala	Ser	Cys	Gly	Ile	Gly	Arg	Arg	His	Gly
				35					40					45
Leu	Asn	Tyr	Cys	Gly	Val	Arg	Ala	Ser	Glu	Arg	Leu	Ala	Glu	Ile
				50					55					60
Asp	Met	Pro	Tyr	Leu	Leu	Lys	Tyr	Gln	Pro	Met	Met	Gln	Thr	Ile
				65					70					75
Gly	Gln	Lys	Tyr	Cys	Met	Asp	Pro	Ala	Val	Ile	Ala	Gly	Val	Leu
				80					85					90
Ser	Arg	Lys	Ser	Pro	Gly	Asp	Lys	Ile	Leu	Val	Asn	Met	Gly	Asp
				95					100					105
Arg	Thr	Ser	Met	Val	Gln	Asp	Pro	Gly	Ser	Gln	Ala	Pro	Thr	Ser
				110					115					120
Trp	Ile	Ser	Glu	Ser	Gln	Val	Ser	Gln	Thr	Thr	Glu	Val	Leu	Thr
				125					130					135
Thr	Arg	Ile	Lys	Glu	Ile	Gln	Arg	Arg	Phe	Pro	Thr	Trp	Thr	Pro
				140					145					150
Asp	Gln	Tyr	Leu	Arg	Gly	Gly	Leu	Cys	Ala	Tyr	Ser	Gly	Gly	Ala
				155					160					165
Gly	Tyr	Val	Arg	Ser	Ser	Gln	Asp	Leu	Ser	Cys	Asp	Phe	Cys	Asn
				170					175					180
Asp	Val	Leu	Ala	Arg	Ala	Lys	Tyr	Leu	Lys	Arg	His	Gly	Phe	
				185					190					

<210> 77

<211> 899

<212> DNA

<213> Homo Sapien

<400> 77

ttgaaaatct actctatcag ctgctgtggt tgccaccatt ctcaggaccc 50

tcgccatgaa agcccttatg ctgctcacc tgtctgttct gctctgctgg 100

gtctcagctg acattcgctg tcaactcctgc tacaaggtcc ctgtgctggg 150

ctgtgtggac cggcagtcct gccgcctgga gccaggacag caatgcctga 200

caacacatgc ataccttggt aagatgtggg ttttctccaa tctgcgctgt 250

ggcacaccag aagagccctg tcaggaggcc ttcaaccaa ccaaccgcaa 300

gctgggtctg acatataaca ccacctgctg caacaaggac aactgcaaca 350
ggcgaggacc cgggccact ccagccctgg gccttgtctt ccttacctcc 400
ttggctggcc ttggcctctg gctgctgcac tgagactcat tccattggct 450
gccctcctc ccacctgcct tggcctgagc ctctctccct gtgtctctgt 500
atccccctggc ttacagaat cgtctctccc tagctcccat ttctttaatt 550
aaacactggt ccgagtggc tcctcatcca tccttcccac ctcacaccct 600
tcaactctct ttttctgggt cccttcccac ttcttccag gacotccatt 650
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tccccaaacc caggctccca tatgtacccc atccccata ctcacctctt 850
tccattttga gtaataaatg tctgagtctg gaaaaaaaaa aaaaaaaaaa 899

<210> 78

<211> 125

<212> PRT

<213> Homo Sapien

<400> 78

Met	Lys	Ala	Leu	Met	Leu	Leu	Thr	Leu	Ser	Val	Leu	Leu	Cys	Trp
1				5					10					15
Val	Ser	Ala	Asp	Ile	Arg	Cys	His	Ser	Cys	Tyr	Lys	Val	Pro	Val
				20					25					30
Leu	Gly	Cys	Val	Asp	Arg	Gln	Ser	Cys	Arg	Leu	Glu	Pro	Gly	Gln
				35					40					45
Gln	Cys	Leu	Thr	Thr	His	Ala	Tyr	Leu	Gly	Lys	Met	Trp	Val	Phe
				50					55					60
Ser	Asn	Leu	Arg	Cys	Gly	Thr	Pro	Glu	Glu	Pro	Cys	Gln	Glu	Ala
				65					70					75
Phe	Asn	Gln	Thr	Asn	Arg	Lys	Leu	Gly	Leu	Thr	Tyr	Asn	Thr	Thr
				80					85					90
Cys	Cys	Asn	Lys	Asp	Asn	Cys	Asn	Ser	Ala	Gly	Pro	Arg	Pro	Thr
				95					100					105
Pro	Ala	Leu	Gly	Leu	Val	Phe	Leu	Thr	Ser	Leu	Ala	Gly	Leu	Gly
				110					115					120
Leu	Trp	Leu	Leu	His										
				125										

<210> 79

<211> 1977
<212> DNA
<213> Homo Sapien

<400> 79

acgggcccga gcggcagtga cgtagggttg gcgcacggat ccgttgccgc 50
tgcagctctg cagtcggggc gttccttcgc cgccgccagg ggtagcggtg 100
tagctgcgca gcgtcgcgcg cgctaccgca cccaggttcg gcccgtaggc 150
gtctggcagc ccggcgccat cttcatcgag cgccatggcc gcagcctgcg 200
ggccgggagc ggccgggtac tgcttgctcc tcggcttgca tttgtttctg 250
ctgaccgcgg gccctgccct gggctggaac gaccctgaca gaatgttgct 300
gcgggatgta aaagctctta cctccacta tgaccgctat accacotccc 350
gcaggctgga tcccatccca cagttgaaat gtgttgagg cagactgggt 400
tgtgattctt atacccaaa agtcatacag tgtcagaaca aaggctggga 450
tgggtatgat gtacagtggg aatgtaagac ggacttagat attgcataca 500
aatttgaaa aactgtggtg agctgtgaag gctatgagtc ctctgaagac 550
cagtatgtac taagaggttc ttgtggcttg gagtataatt tagattatac 600
agaacttggc ctgcagaaac tgaaggagtc tggaaagcag cacggctttg 650
cctctttctc tgattattat tataagtggc cctcggcgga ttcctgtaac 700
atgagtggat tgattacat cgtggtactc cttgggatcg cttttgtagt 750
ctataagctg ttcctgagtg acgggcagta ttctcctcca ccgtactctg 800
agtatcctcc attttccac cgttaccaga gattcaccaa ctcagcagga 850
cctcctcccc caggctttaa gtctgagttc acaggaccac agaatactgg 900
ccatggtgca acttctggtt ttggcagtg ttttacagga caacaaggat 950
atgaaaattc aggaccaggg ttctggacag gcttgggaac tggggaata 1000
ctaggatatt tgtttggcag caatagagcg gcaacaccct tctcagactc 1050
gtggtactac ccgtcctatc ctccctccta cctggcacg tggaataggg 1100
cttactcacc ccttcatgga ggctcgggca gctattcggg atgttcaaac 1150
tcagacacga aaaccagaac tgcacagga tatggtggta ccaggagacg 1200
ataaagtaga aagttggagt caaacactgg atgcagaaat tttggatttt 1250
tcatcacttt ctcttttaga aaaaagtact acctgttaac aattgggaaa 1300
aggggatatt caaaagttct gtggtgttat gtccagtgtg gctttttgta 1350

ttctattatt tgaggctaaa agttgatgtg tgacaaaata cttatgtggt 1400
 gtatgtcagt gtaacatgca gatgtatatt gcagtttttg aaagtgatca 1450
 ttactgtgga atgctaaaaa tacattaatt tctaaaacct gtgatgccct 1500
 aagaagcatt aagaatgaag gtgttgact aatagaaact aagtacagaa 1550
 aatttcagtt ttaggtgggt gtagctgatg agttattacc tcatagagac 1600
 tataatatc tatttggtat tatattattt gatgtttgct gttcttcaaa 1650
 catttaaate aagctttgga ctaattatgc taatttgtga gttctgatca 1700
 cttttgagct ctgaagcttt gaatcattca gtgggtggaga tggccttctg 1750
 gtaactgaat attaccttct gtaggaaaag gtggaaaata agcatctaga 1800
 aggttgttgt gaatgactct gtgctggcaa aaatgcttga aacctctata 1850
 tttctttcgt tcataagagg taaaggctcaa atttttcaac aaaagtcttt 1900
 taataacaaa agcatgcagt tctctgtgaa atctcaaata ttgttgtaat 1950
 agtctgtttc aatcttaaaa agaata 1977

<210> 80

<211> 339

<212> PRT

<213> Homo Sapien

<400> 80

Met	Ala	Ala	Ala	Cys	Gly	Pro	Gly	Ala	Ala	Gly	Tyr	Cys	Leu	Leu
1				5						10				15
Leu	Gly	Leu	His	Leu	Phe	Leu	Leu	Thr	Ala	Gly	Pro	Ala	Leu	Gly
			20						25					30
Trp	Asn	Asp	Pro	Asp	Arg	Met	Leu	Leu	Arg	Asp	Val	Lys	Ala	Leu
				35					40					45
Thr	Leu	His	Tyr	Asp	Arg	Tyr	Thr	Thr	Ser	Arg	Arg	Leu	Asp	Pro
				50					55					60
Ile	Pro	Gln	Leu	Lys	Cys	Val	Gly	Gly	Thr	Ala	Gly	Cys	Asp	Ser
				65					70					75
Tyr	Thr	Pro	Lys	Val	Ile	Gln	Cys	Gln	Asn	Lys	Gly	Trp	Asp	Gly
				80					85					90
Tyr	Asp	Val	Gln	Trp	Glu	Cys	Lys	Thr	Asp	Leu	Asp	Ile	Ala	Tyr
				95					100					105
Lys	Phe	Gly	Lys	Thr	Val	Val	Ser	Cys	Glu	Gly	Tyr	Glu	Ser	Ser
				110					115					120
Glu	Asp	Gln	Tyr	Val	Leu	Arg	Gly	Ser	Cys	Gly	Leu	Glu	Tyr	Asn
				125					130					135

Leu	Asp	Tyr	Thr	Glu	Leu	Gly	Leu	Gln	Lys	Leu	Lys	Glu	Ser	Gly	140	145	150
Lys	Gln	His	Gly	Phe	Ala	Ser	Phe	Ser	Asp	Tyr	Tyr	Tyr	Lys	Trp	155	160	165
Ser	Ser	Ala	Asp	Ser	Cys	Asn	Met	Ser	Gly	Leu	Ile	Thr	Ile	Val	170	175	180
Val	Leu	Leu	Gly	Ile	Ala	Phe	Val	Val	Tyr	Lys	Leu	Phe	Leu	Ser	185	190	195
Asp	Gly	Gln	Tyr	Ser	Pro	Pro	Pro	Tyr	Ser	Glu	Tyr	Pro	Pro	Phe	200	205	210
Ser	His	Arg	Tyr	Gln	Arg	Phe	Thr	Asn	Ser	Ala	Gly	Pro	Pro	Pro	215	220	225
Pro	Gly	Phe	Lys	Ser	Glu	Phe	Thr	Gly	Pro	Gln	Asn	Thr	Gly	His	230	235	240
Gly	Ala	Thr	Ser	Gly	Phe	Gly	Ser	Ala	Phe	Thr	Gly	Gln	Gln	Gly	245	250	255
Tyr	Glu	Asn	Ser	Gly	Pro	Gly	Phe	Trp	Thr	Gly	Leu	Gly	Thr	Gly	260	265	270
Gly	Ile	Leu	Gly	Tyr	Leu	Phe	Gly	Ser	Asn	Arg	Ala	Ala	Thr	Pro	275	280	285
Phe	Ser	Asp	Ser	Trp	Tyr	Tyr	Pro	Ser	Tyr	Pro	Pro	Ser	Tyr	Pro	290	295	300
Gly	Thr	Trp	Asn	Arg	Ala	Tyr	Ser	Pro	Leu	His	Gly	Gly	Ser	Gly	305	310	315
Ser	Tyr	Ser	Val	Cys	Ser	Asn	Ser	Asp	Thr	Lys	Thr	Arg	Thr	Ala	320	325	330
Ser	Gly	Tyr	Gly	Gly	Thr	Arg	Arg	Arg							335		